

### **REMARKS**

Claims 1, 3-8, 11-13 and 15-20 are pending in this application. By this Amendment, claims 3 and 17 are amended to correct minor informlities. No new matter has been added.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments place the application in condition for allowance (for the reasons discussed herein); do not raise any new issue requiring further search and/or consideration (as the amendments amplify issues previously discussed throughout prosecution); and satisfy a requirement of form asserted in the previous Office Action. The amendments are necessary and were not earlier presented because they are made in response to objections raised in the final rejection. Entry of the amendments is thus respectfully requested.

#### **I. Objections to Title**

The Office Action objects to the title as being non-descriptive. The title has been amended to read METHOD FOR COMPRESSING PRINTING HINT DATA SENT TO A PRINTER. Accordingly, withdrawal of the objection is respectfully requested.

#### **II. Claim Objections**

Claim 3 is objected to for improper dependence. Claim 3 has been amended to depend from claim 1. Accordingly, withdrawal of the objection is respectfully requested.

Claim 17 is objected to because of an informality. In accordance with the Examiner's helpful suggestion, claim 17 has been amended to recite "the contone rendering module ~~produces use~~ uses run length compression." Accordingly, withdrawal of the objection is respectfully requested.

#### **III. §102 Rejection**

The Office Action rejects claims 1, 3, 4, 6, 8, 12, 13, 15, 16 and 18 under 35 U.S.C. §102(b) over U.S. Patent No. 6,020,979 to Zeck et al. ("Zeck"). This rejection is respectfully traversed.

Claim 1 recites that "fully saturated pixels that are sequentially adjacent to pixels with printing hints indicating they are edge pixels will have their printing hints changed to indicate that they are edge pixels and will propagate the adjustment to further sequentially adjacent fully saturated pixels [and] the adjusted printing hints require less memory space than the original printing hints." Independent claims 8 and 13 recite similar features.

The Office Action asserts Zeck discloses these features.

Zeck allegedly discloses that in typical printing systems a 256 level system ( $2^N$  levels, where in  $n=8$ ) is used to denote information for each pixel. Zeck allegedly discloses using fewer than 256 levels, specifically Zeck discloses using  $2^N-M$  levels, to denote information for each pixel. Zeck then allegedly discloses using the remaining  $M$  levels for other uses. See col. 6 lines 16-29.

For example, Zeck allegedly discloses dividing a print job into areas requiring BINRES printing, and areas which can be served merely using CONRES printing. See Fig. 4A of Zeck. Zeck further discloses assigning  $2^N-M$  levels of contone data to those CONRES areas, and  $M$  levels of data to those areas requiring BINRES. As such, Zeck allegedly discloses that the two printing types can be combined, and sent to the halftone processor in a single 256 level data stream.

The Office Action asserts that the 256 levels are equivalent to the recited printing hints. However, the 256 levels disclosed by Zeck are used to convey information regarding the intensity of the grey scale (or color) in those pixels. See col. 3 line 49 - col. 4 line 7. Zeck never discloses that these hints convey whether a pixel is an edge pixel, as required by claim 1. Furthermore, when Zeck discloses that the remaining  $M$  levels are used "to describe more accurate edge representations" (col. 6 line 25-26) Zeck is referring to improving the appearance of the edges (i.e. improving appearance from Fig. 1 to Fig. 2) not whether the pixel is an edge pixel.

The Office Action also asserts that by not using all 256 levels, as originally intended, the system disclosed by Zeck uses less memory, as recited in claim 1.

However, Zeck discloses that all 256 levels are still used. See col. 6 lines 25-26. Specifically, Zeck discloses that the M printing hints are used to store different information. In effect Zeck discloses preventing some of the 256 levels from containing useless information. See col. 5 lines 14-31. As such, Zeck does not disclose that the adjusted printing hints require less memory. Rather, Zeck discloses that the same memory hints convey more information using the same amount of memory.

The Office Action also asserts that Fig. 1 of Zeck discloses fully saturated pixels, represented as a CONRES image, that are sequentially adjacent to pixels whose printing hints indicate they are edge pixels, as shown in Fig. 2 of Zeck where edge pixels are represented as a BINRES image. The Office Action asserts that Zeck discloses combining the CONRES and BINRES images into a single composite image. The Office Action asserts that this is equivalent to converting the printing hints of saturated pixels into edge pixels and propagating the change, as recited in claim 1. However, these assertions lack merit.

Zeck does not disclose changing printing hints based on whether the printing hints indicate the pixel is saturated or an edge pixel. Specifically, Zeck does not disclose how the regions that need CONRES versus the regions that need BINRES are chosen. Rather, Zeck merely discusses certain general properties that these regions may possess. By contrast, claim 1 specifically recites changing the printing hints of only "fully saturated pixels that are sequentially adjacent to pixels with printing hints indicating they are edge pixels." Zeck does not disclose this very specific criteria.

Furthermore, claim 1 recites that these changes propagate along sequential saturated pixels. Zeck again fails to disclose this specific criteria for adjusting printing hints.

Because each and every feature of independent claim 1 is not taught in Zeck, claim 1 and claims dependent therefrom are not anticipated by Zeck. Independent claims 8 and 13 are also not anticipated for similar reasons. Thus, withdrawal of the rejection is respectfully requested.

**IV. §103(a) Rejection**

Claims 5, 7, 17, 19 and 20 are rejected under 35 U.S.C. §103(a) over Zeck in view of U.S. Patent No. 4,673,987 to Toyokawa. This rejection is respectfully traversed.

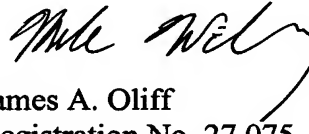
Claims 5, 7, 17, 19 and 20 are in condition for allowance based on their dependence on claims 1, 8 and 13, for the reasons stated above, as well as for the separately patentable subject matter they recite. Withdrawal of the rejection is respectfully requested.

**V. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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